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A New Species of *Baetis* From Ecuador

(Ephemeroptera: Baetidae)

VELMA KNOX MAYO

2702 E. Seneca St., Tucson, Arizona, 85716

Baetis ellenae Mayo is one of a group of large species that occurs from Mexico to Peru. When mature, nymphs characteristically climb out of the water onto rocks or logs wet by spray.

Baetis ellenae Mayo, new species

(Figs. 2, 3, 6)

MALE IMAGO.—Length: body 10 mm; fore wing 10 mm; caudal filaments 26 mm; body color yellow with rust markings. Head bright yellow; bases of antennae yellow, bordered with brown distally; distal segments dark smoky or black; median carina with a blackish brown band; eyes turbinate, orange-red, oval and moderately convex. Thorax bright yellow; mesonotum olive tinged with rust colored speckles near wing bases; metanotum yellow, postscutellum bright rust; pleural sclerites yellow, reddish near coxae, on posterior portion of episternum and on pleural trochantin; fore wing amber tinged, veins distinctly reddish, marginal intercalaries paired (Fig. 2); hind wings margined with reddish-brown and with heavier reddish-brown border from base to costal projection (Fig. 3); hind wings with only two longitudinal veins; legs yellow to orange with rust and blackish brown markings; fore coxae yellow with rust streaks; trochanters tinged with rust; fore femora bright orange tinged with blackish brown apically; tibiae slightly longer than femora, yellow with blackish brown apex; tarsi slightly shorter than tibiae, yellow, brown at joints; fourth tarsomere and claw smoky; middle and hind legs yellow, penciled with black on posterior and anterior margins; femora yellow, penciled with black distally; tarsi yellow, narrowly margined with red; fourth tarsal segment and claw smoky. Abdominal terga bright yellow with blackish-brown posterior borders on either side of midline and laterally near pleural fold, borders wider on tergum 1. Genital forceps as in fig. 6. Caudal filaments pale yellow with reddish-brown joints.

FEMALE IMAGO.—Length: body 8 mm; fore wing: 10 mm. Thorax reddish olive-brown; parapsidal grooves yellow. Abdominal terga reddish brown, posterior borders dark brown; abdominal sterna yellow with reddish ganglionic markings.

NYMPH: figs. 1, 4, 5, 7–10.—Length: body 11–13 mm; caudal filaments 7.5–8.5 mm; body color pale amber. Head pale amber; antennae pale yellow, first segment large; mouthparts as in figs. 4, 5, 8–10. Thorax amber; legs pale yellow; femora reddish brown at apices and along margins, with short spinules on dorsal crests; tibiae with short spines at apices; tarsal claws with 8 denticles (fig. 7).

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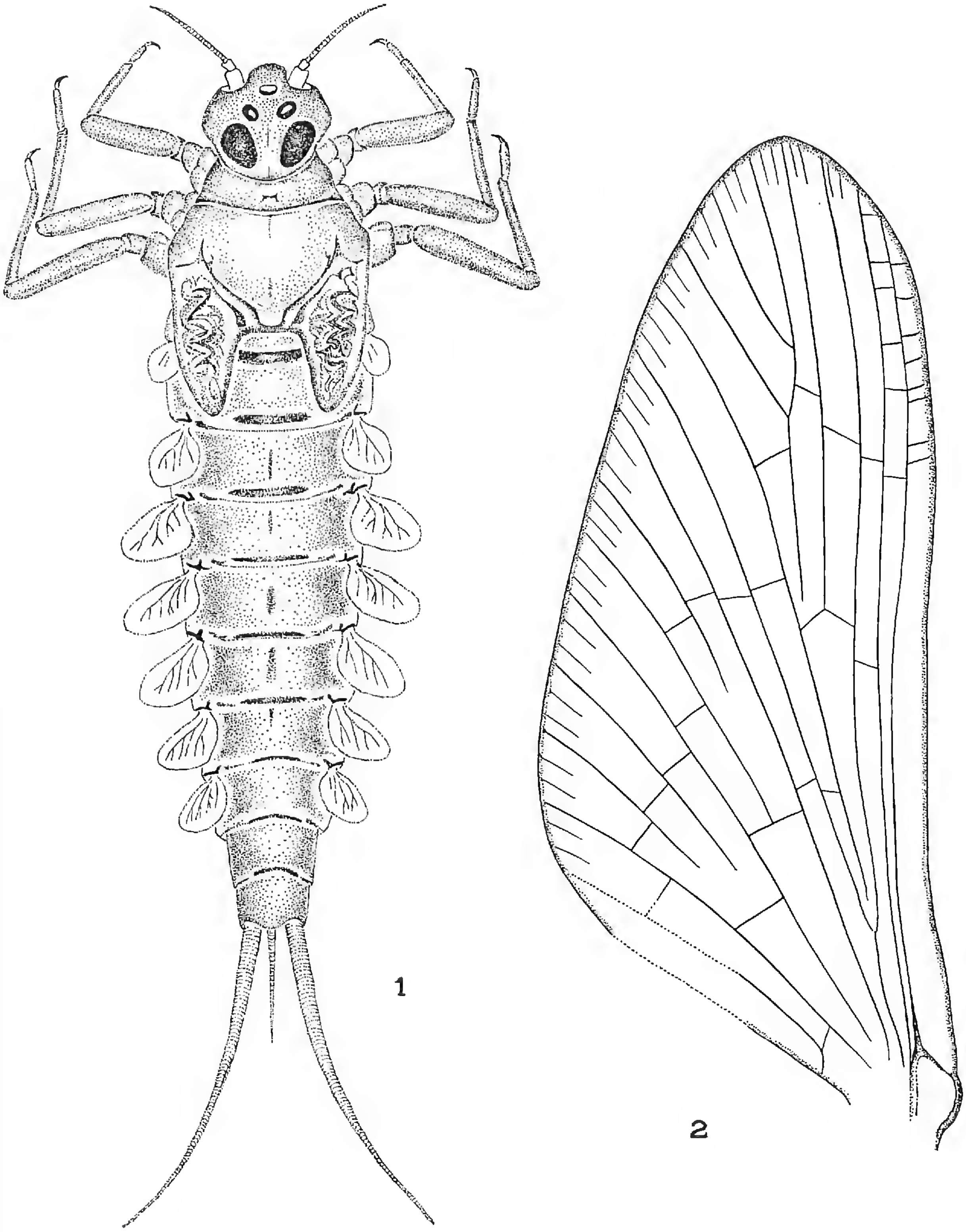
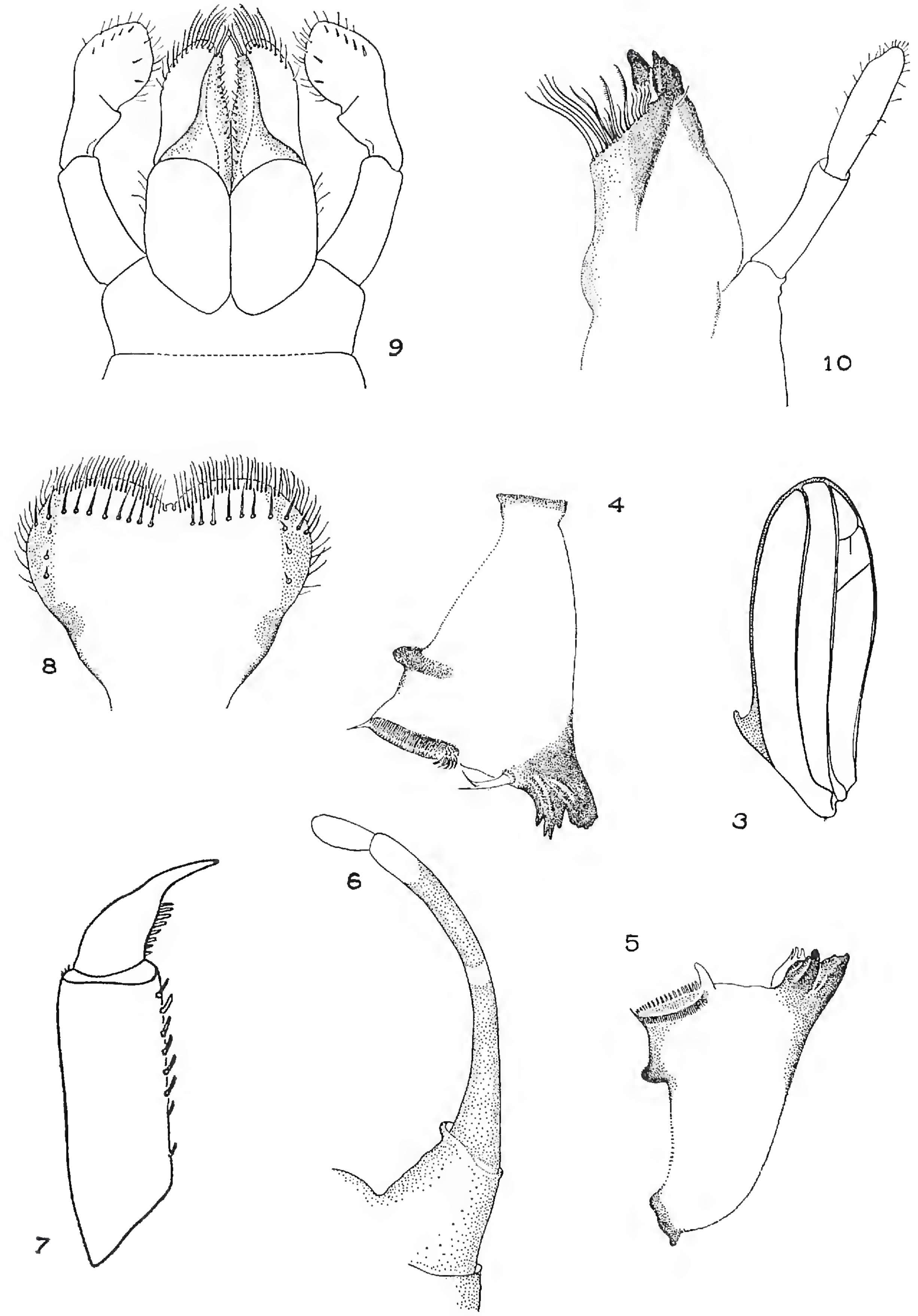


FIGS. 1–2. *Baetis ellenae* Mayo. Fig. 1. Dorsal view of nymph. Fig. 2. Fore wing of imago.

Posterior borders abdominal terga amber with dark reddish brown medially and mesad to gills (fig. 1); terga 3–7 with reddish-brown streaks along midline in some specimens; gill trachea pale to dark reddish brown; abdominal sterna and caudal filaments amber.

HOLOTYPE MALE IMAGO, RIO AMAYO, MACUCHI, COTOPAXI PROVINCE, ECUADOR; altitude about 6000 ft., V. K. Mayo, 30 June 1943. Entomological collection, University of Utah, Salt Lake City. Female and 1 paratype imago, same data, same deposition as holotype. Paratypes: 4 nymphs, same data, 7 July 1942; 1 nymph



FIGS. 3–10. *Baetis ellenae* Mayo, various structures of nymph and imago. Fig. 3. Hind wing of imago. Figs. 4–5. Right and left mandible, respectively, of nymph. Fig. 6. Rights forceps of adult male. Fig. 7. Tarsus and claw of nymph. Figs. 8–10. Labrum, labium and maxilla, respectively, of nymph.

same data, 22 November, 1942; 4 nymphs same data, 6 March 1943; 16 nymphs near Pilalo Road at 5 Km., 7 March 1943. 12 nymphs same data, 30 June 1943. All nymphs same deposition as holotype. Nymphs and adults were associated by rearing.

The nymphs of *B. ellenae* are the most common species of the genus in the Macuchi region. Mature specimens commonly climb out of the water onto a log or rock where the spray wets them. The only other nymph described in the group with similar habits was designated *Baetis* sp. 1 by Roback (1966). Nymphs of the two species are of the same size but differ in coloration. *B. ellenae* is pale amber, while *Baetis* sp. 1 is brown. The two species also differ in details of the mouthparts (fig. 4, 5, 8, 10) and figs. 77, 80–83 (Roback 1966). This species is named in honor of the writer's daughter, Ellen Mayo Harbert.

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ROBACK, S. S. 1966. Catherwood Foundation Peruvian-Amazon Expedition, VI-Ephemeroptera nymphs. Monogr. Acad. Sci. Phila., 14: 129–199, 22 pl.

SCIENTIFIC NOTE

New Records for Georyssidae and Cyathoceridae (Coleoptera) in Mexico. —When collecting in Sonora on November 31, 1972 at the Arroyo Cuyuchaba, 11.5 miles west of Alamos, Karl Stephan and I picked up three species of two lesser known families of Coleoptera, the Georyssidae and Cyathoceridae (= Lepiceridae). The species collected were *Georyssus minor* Sharp (3 individuals), *Cyathocerus horni* Sharp (2 individuals) and *Cyathocerus bufo* Hinton (2 individuals). The specimens were identified by comparison with Hinton's descriptions of the three species (1933, Pan-Pac. Entomol. 9: 160–162).

The beetles were obtained by placing river drift, which had been deposited on the banks of the arroyo after two days of heavy rain, in a pan of water and then collecting the struggling Coleoptera. The cyathocerids and georyssids were observed when they were climbing through the debris just under the surface of the water. They did not attempt to climb on top of the floating debris as did the other Coleoptera in the pan. Hinton obtained his larger series of the species from an identical habitat, damp trash piles left by a river just west of Mexico City at Tejupilco.

Hinton's collection of the three species were the northernmost records for the two sharp species (*C. bufo* is known only from its type locality of Tejupilco). The records from Alamos extend their range approximately 700 miles, to the northern edge of the thorn forest in Sonora.—DONALD S. CHANDLER, *University of Arizona, Tucson 84721.*